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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,331	01/24/2002	Alan Coull	11033-064001	3208

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EXAMINER	
HINZE, LEO T	

ART UNIT	PAPER NUMBER
2854	

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/831,331	COULL, ALAN	
	Examiner	Art Unit	
	Leo T. Hinze	2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-13,16,17 and 19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-13,16,17 and 19* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 16, 17, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Look, US 5,847,743.

Regarding claim 16, Look teaches a printing station comprising: a carriage (41, Fig. 4), a printing apparatus (50, Fig. 4) mounted on the carriage, the carriage being moveable to move the printing apparatus transversely ("moves the print head in a second, "cross web" , direction", col. 3, lines 4-5), line whilst the printing apparatus can effect printing on each of a plurality of articles at the printing station, each of the articles being located in one of the lanes (areas 140a, 140b, and 142, Fig. 5, are analogous to "lanes" and "articles"; col. 8, lines 1-20), the carriage being moveable substantially continuously across the lanes whilst the printing apparatus prints the information on each of the articles of the set in turn without or substantially without stopping; wherein the printing apparatus includes a housing (52, Fig. 4) mounted on the carriage, and a print head (44, Fig. 4) capable of being moved relative to the housing to and from a printing position ("print head 44 may be retractably disengaged from contact with ribbon 66 while moving across sheeting 46", col. 5, lines 18-20).

Regarding claim 17, Look also teaches wherein the carriage is mounted on a gantry (70, 71, Fig. 3) which extends over the lanes and the printing apparatus is moved over the lanes on the carriage.

Regarding claim 19, Look also teaches wherein movement of the carriage is controlled by a controller (112, Fig. 4) which co-ordinates printing with carriage movement.

Further regarding claims 16, 17, and 19, while features of an apparatus may be recited either structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function. See MPEP § 2114. Because Look teaches the structure as claimed in claims 16, 17, and 19 of the instant application, and because Look teaches a structure capable of performing the functions of the apparatus of claims 16, 17, and 19 of the instant application, Look fully anticipates the limitations claimed in claims 16, 17, and 19.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-5 and 7-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sherrington, US 3,728,962 in view of Look..

Sherrington teaches a marking apparatus for multi-lane web material, including:

- a method of printing information on each article of a set of articles ("web is divided into a plurality of parallel lanes, each lane generally representing a separate series of packages,... it is desirable to imprint each separate package with the date, code, or other indicia", col. 1, lines 14-19) arranged in generally parallel lanes, at a printing station (10, Fig. 1), the method comprising: providing the printing station including a gantry (30, Fig. 1) , a carriage mounted to the gantry (38, Fig. 1), and a printing apparatus (40, Fig. 1) having a housing mounted on the carriage, and a print head (claim 1);
- wherein all of the articles of the set are positioned at the printing station simultaneously whilst the printing apparatus is moved transversely across all the lanes ("stopping of the web to effect imprinting", col. 1, lines 44-45) (claim 4);
- wherein the articles are conveyed severally in their respective lanes, to the printing station, and are arranged to be present at the printing station so that the printing apparatus may be moved into registry with the articles and printing performed ("web is divided into a plurality of parallel lanes, each lane generally representing a separate series of packages,... it is desirable to imprint each separate package with the date, code, or other indicia", col. 1, lines 14-19) (claim 5);
- conveying the articles of the set in their parallel lanes to the printing station, arresting movement of the set of articles at the printing station while the information is printed on each of the articles of the set ("stopping of the web to effect imprinting", col. 1, lines 44-45) (claim 11);

- a method of printing information on each article of a set of articles arranged in generally lanes, at a printing station articles ("web is divided into a plurality of parallel lanes, each lane generally representing a separate series of packages,... it is desirable to imprint each separate package with the date, code, or other indicia", col. 1, lines 14-19) (claim 12);
- utilizing the same imprinting unit for imprinting two or more lanes by automatically displacing said single unit can decrease the cost of a multi-lane printing device (col. 1, lines 19-25).

Sherrington does not teach:

- the printing apparatus being movable transversely across the lanes; continuously moving the printing apparatus transversely across the lanes to bring the printing apparatus into registry with each article of the set in turn; at each registry position, whilst continuing to move the printing apparatus, moving the print head of the apparatus relative to the housing and relative to the respective article to a printing position in which the print head is capable of printing information on the article; continuing to move the printing apparatus transversely relative to the article whilst effecting printing with the print head; and when the information is printed, whilst continuing to move the printing apparatus transversely, moving the print head relative to the housing out of the printing position (claim 1);

- wherein the printing apparatus is continuously moved across the carriage transversely across the lanes, relative to a base structure relative to which each of the articles of the set is held stationary during printing (claim 2);
- wherein the carriage is moved transversely of the lane at a generally constant speed (claim 3);
- the printing apparatus is continuously moved (claim 5);
- wherein the print head is of the kind having a plurality of printing elements which are selectively actuated during printing by a control means to effect printing of desired information on each of the articles (claim 7);
- wherein the printing apparatus is a thermal printer in which there are printing elements arranged in a generally linear array along the print head with the array extending generally transversely to the direction of movement of the printing apparatus across the lanes, the method including selectively energizing the printing elements during printing to remove pixels of marking medium from a carrier positioned between the printing elements and the article (claim 8);
- wherein the method includes moving the carrier relative to the print head as the printing apparatus moves transversely of the lanes of articles during printing, so as that fresh carrier is continually being positioned between the print head and the article on which information is being printed (claim 10);
- continuously moving a printing apparatus relative to the lanes to bring the printing apparatus into registry with each article of the set in turn, the printing apparatus

including a print head and a carrier for marking medium which is applied to the articles during printing; at each registry position, whilst continuing to move the printing apparatus, effecting printing with the print head; and when the information is printed, continuing to move the printing apparatus to the next registry position (claim 12);

- wherein the method is applied to printing apparatus having a thermal print head having printing elements which are selectively energized during printing to melt and remove pixels of marking medium from the carrier and deposit the pixels of ink on to the articles (claim 13).

Look teaches a thermal printing apparatus, including:

- the printing apparatus (41, Fig. 1) being movable transversely across the lanes ("cross web"; col. 5, line 7); continuously moving the printing apparatus transversely across the lanes to bring the printing apparatus into registry with each article of the set in turn (col. 8, lines 5-12); at each registry position, whilst continuing to move the printing apparatus, moving the print head of the apparatus relative to the housing and relative to the respective article to a printing position in which the print head is capable of printing information on the article (col. 7, lines 14-19); continuing to move the printing apparatus transversely relative to the article whilst effecting printing with the print head; and when the information is printed, whilst continuing to move the printing apparatus transversely, moving the print head relative to the housing out of the printing position (claim 1);

- wherein the printing apparatus is continuously moved across the carriage transversely across the lanes, relative to a base structure relative to which each of the articles of the set is held stationary during printing (col. 8, lines 5-12) (claim 2);
- wherein the carriage is moved transversely of the lane at a generally constant speed (col. 7, lines 16-18) (claim 3);
- the printing apparatus is continuously moved (col. 7, lines 16-18) (claim 5);
- wherein the print head is of the kind having a plurality of printing elements which are selectively actuated during printing by a control means to effect printing of desired information on each of the articles ("discrete heating elements", col. 4, line 51) (claim 7);
- wherein the printing apparatus is a thermal printer ("thermal print head", col. 4, line 38) in which there are printing elements arranged in a generally linear array along the print head with the array extending generally transversely to the direction of movement of the printing apparatus across the lanes ("discrete heating elements", col. 4, line 51), the method including selectively energizing the printing elements during printing to remove pixels of marking medium from a carrier (66, Fig. 4) positioned between the printing elements and the article (col. 4, lines 45-65) (claim 8);
- wherein the method includes moving the carrier relative to the print head as the printing apparatus moves transversely of the lanes of articles during printing, so as that fresh carrier is continually being positioned between the print head and the article on which information is being printed (col. 5, lines 12-17)(claim 10);

- continuously moving a printing apparatus relative to the lanes to bring the printing apparatus into registry with each article of the set in turn, the printing apparatus including a print head (44, Fig. 4)and a carrier (66, Fig. 4) for marking medium which is applied to the articles during printing; at each registry position, whilst continuing to move the printing apparatus, effecting printing with the print head; and when the information is printed, continuing to move the printing apparatus to the next registry position (col. 8, lines 5-20) (claim 12);
- wherein the method is applied to printing apparatus having a thermal print head having printing elements which are selectively energized during printing to melt and remove pixels of marking medium from the carrier and deposit the pixels of ink on to the articles (col. 4, lines 45-55) (claim 13);
- the apparatus is capable of printing on discrete areas (142, Fig. 5) arranged in parallel lanes (Fig. 5), while continuously moving the printhead transversely while moving the printhead into and out of contact with the carrier as necessary (col. 8, lines 1-20).

Regarding claims 1-3, 7-10, and 12-13, it would have been obvious to one having ordinary skill in the art to modify Sherrington by replacing the printing apparatus of Sherrington with the printing apparatus of Look to give the desired functionality of claims 1-3, 7-10, and 12-13 as taught by Look, because Sherrington teaches that it is advantageous to reduce the number of print heads by increasing the number of lanes onto which the printhead can print, and the

printhead of Look can provide the functionality required in Sherrington by using only one printhead to print on all of the articles arranged in parallel lanes.

Regarding claims 4, 5, and 11, the combination of Sherrington and Look teaches all that is claimed as discussed above.

Response to Arguments

5. Applicant's arguments, see pages 6-7, filed 23 February, 2004, with respect to the rejection(s)of claim(s) 1-5, 7, 11, 16, 17, and 19 under 35 U.S.C. § 102(e) and claims 1, 6, 8-10, 12, and 13 under 35 U.S.C. § 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the rejections cited above.

6. Regarding applicant's arguments on page 7 regarding the application of the Look reference, the examiner disagrees that Look is not at all concerned with printing on a plurality of articles across lanes. As discussed in the above 102(b) rejection of claims 12 and 13 by Look, Look teaches an apparatus having all of the functionality of the apparatus claimed in claims 12 and 13.

The relative scale of the apparatus (response, p. 7, lines 4-5) in this case does not affect patentability, as nothing in the claims seeks to define the scale or size of the apparatus. Further, it has been held that changes in size are not an inventive step. See MPEP § 2144.04.

Regarding applicant's arguments in paragraphs 2 and 3 of p. 7, Look teaches precisely what the applicant is claiming: constant movement of a printing carriage (41, Fig. 4) across an item or items to be printed, while moving the print head (44, Fig. 4) into and out of contact with

a carrier which itself is being moved by the printhead (Look, col. 8, lines 1-20). No redesign, wholesale or otherwise, save a possible change size, of the apparatus of Look is necessary for the apparatus to perform the functions of the apparatus claimed by the applicant.

Further regarding the applicability of Look to the apparatus claimed in the instant application, Fig. 5 of Look clearly shows discrete areas requiring printed information arranged in parallel rows. While these areas are not exactly a set of articles, the operation of the apparatus of Look is exactly the same as it would be if the sheet were a set of articles. The carriage of Look (41, Fig. 5) moves continuously transversely to the advancing direction of the medium which is being printed while the medium is stationary, and the print head (44, Fig. 5) moves into contact with an advancing ribbon (66, Fig. 5) when necessary to print information, and out of contact with the ribbon when no printing is required. Look further cites a prevention of unnecessary ribbon usage as an advantage of the system (col. 8, lines 16-17) to further illustrate that the print head is contacted with the carrier only when required.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leo T. Hinze whose telephone number is (571) 272-2167. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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22 March, 2004

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